

NISSOLIA CHIAPENSIS, A NEW SPECIES OF LEGUMINOSAE FROM MEXICO

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Among the vast amount of material collected in Chiapas, México by Dennis E. Breedlove is an interesting new species of Nissolia. It exhibits characters of several known species but differs in some degree from each. In aspect as to leaves and inflorescences it suggests N. microptera Poir. (previously known as N. hirsuta DC.; see *Phytologia* 20: 324. 1970) and some specimens of N. fruticosa Jacq. var. fruticosa, but the flowers are larger and the calyx teeth longer than in either. The presence of glandular-based setae on the calyx and fruit is as in N. platycarpa Benth. but the two species differ in other characters of the inflorescence and leaflets. Hitherto, only N. fruticosa var. fruticosa has been known from Chiapas.

Following is a description of the new species and a key to the taxa of Nissolia revised somewhat from my earlier treatment of the genus (*Contr. U. S. Nat. Herb.* 32: 173-206. 1956).

NISSOLIA CHIAPENSIS Rudd, sp. nov.

Herba, suffruticosa volubilis, caulibus inflorescentiisque aliquantum setiferis glandulosis; foliis 5-foliolatis; foliolatis ovatis ellipticisve, 2-6 cm. longis, 1-2.5 cm. latis, pubescentibus; floribus circa 10 mm. longis, fere sessilibus, in capitulum globosum axillare aggregatis; calyce 5-6 mm. long, puberulento atque setoso, dentibus filiformibus; fructu articulado, puberulento atque setoso, articulo apicali alato.

Herbaceous or suffrutescent vine; stems patent-pubescent and also beset with glandular-based setae; stipules deltoid-attenuate, 10 mm. long, 2 mm. wide at the base, puberulent; leaves 5-foliolate, the axis 3-5 cm. long, puberulent, including petiole 2-3.5 cm. long; leaflets ovate to elliptic, 2-6 cm. long, 1-2.5 cm. wide, acute, mucronulate, the base rounded to acute, the upper surface moderately pubescent with crispate hairs, the lower surface densely pubescent with crispate or lax hairs, the secondary veins about 5 pair, moderately conspicuous; inflorescences axillary, capitate-fasciculate, about 10-20-flowered, the pedicels 1 mm. long or less; bracts and bracteoles linear-deltoid, 2-5 mm. long, 0.5 mm. wide, ciliate and patent-pubescent, caducous; flowers about 10 mm. long; calyx 5-6 mm. long, puberulent and setose, the tube 2-2.5 mm. long, 2 mm. in diameter, the teeth 3-4 mm. long, filiform but not setaceous, puberulent; petals yellow, the vexillum puberulent on the outer face; young fruit puberulent and setose, the terminal wing as long or longer than the basal, 2- or 3-articulate fertile portion, the stipe about 3 mm. long; mature fruit not seen.

Type: D. E. Breedlove 20391, México, Chiapas, 5 km. east of Berriozábal along hwy. 190, gentle slope with tropical deciduous forest, elev. 800 m., "vine in trees", 11 October 1971 (holotype DS; isotype SFV ).

Key to taxa of Nissolia

Terminal article of fruit scarcely larger than the fertile articles; stems prostrate; leaflets usually conduplicate when dry (Southern Arizona; México: Sonora and Chihuahua southward to Jalisco and Hidalgo)

1. N. wislizenii (A. Gray) A. Gray

Terminal article of fruit expanded, alate, conspicuously longer and wider than the fertile articles; stems chiefly climbing; leaflets usually drying or wilting without folding, the axis essentially straight.

Stipe of fruit usually shorter than the calyx, about 1-2 (-4) mm. long; flowers 4-20 mm. long.

Calyx teeth setaceous, 3-4 mm. long, terminating in glandular setae 1-2 mm. long (México: Baja California Sur)

2. N. setosa T. S. Brandegee

Calyx teeth not setaceous or the setae less than 1 mm. long.

Fruit and usually the calyx tube beset with numerous glandular setae.

Stems commonly white-pubescent with moderate or no development of glandular setae; inflorescences fasciculate; flowers 10-12 mm. long.

Leaflets elliptic to orbicular, about as wide as long, 0.5-4.5 cm. long, 0.4-4 cm. wide, the secondary veins usually inconspicuous; inflorescences 1-8-flowered, the pedicels 5-12 mm. long; flowers (8-) 10-12 mm. long; calyx 6-7 mm. long, the tube 2-3 mm. long and 2-3 mm. in diameter, the teeth 2-4 mm. long (México: Sonora, Sinaloa, Tamaulipas, southward to Huebla)

3. N. platycarpa Benth.

Leaflets ovate to elliptic, the length about twice the width, 2-6 cm. long, 1-2.5 cm. wide, the secondary veins moderately conspicuous on the lower surface; inflorescences about 10-20-flowered, the pedicels 1 mm. long or less; flowers about 10 mm. long; calyx 5-6 mm. long, the tube 2-2.5 mm. long, 2 mm. in diameter, the teeth 3-4 mm. long (México: Chiapas)

4. N. chiapensis Rudd

Stems conspicuously glandular-setose, otherwise glabrous; inflorescences elongated, racemose or paniculate; flowers 12-15 mm. long (México: Guerrero)

5. N. hintonii Sandw.

Fruit glabrous or pubescent but lacking glandular setae; calyx usually without setae.

Flowers 14-20 mm. long; calyx 6.5-10 mm. long, the tube 4.5-6 mm. long, 4-5 mm. in diameter; leaves 5- or 7-foliolate (Southwestern Texas; México: Coahuila, Nuevo León)

6. N. platycalyx S. Wats.

Flowers 4-13 mm. long; calyx 2-7 mm. long, the tube 2-4 mm. long, 1.5-4 mm. in diameter; leaves 5-foliolate.

Stipules about 7-10 mm. long, 1.5-3 mm. wide at the base, usually tomentulose below (México: Jalisco, Querétaro, México, Michoacán, Guerrero)

7. N. laxior (Robins.) Rose

Stipules about 3-5 mm. long, 1 mm. wide at the base or less, subglabrous to moderately pubescent below.

Calyx with tube 2.5-4 mm. long, 2-4 mm. in diameter, the teeth 1-4 mm. long.

Pedicels, calyx, leaflets, and rachis of leaf glabrous or but sparingly pubescent exclusive of glandular setae; leaflets thin, mostly membranous.

Calyx 5-7 mm. long, the tube (2-) 3-4 mm. long, 2-3 mm. in diameter, the teeth 2-4 mm. long; flowers (8-) 10-12 mm. long; inflorescences fasciculate, about 1-8-flowered, the pedicels 6-10 mm. long; leaflets elliptic to subrhombic, 0.5-3.5 cm. long, 0.3-2.5 cm. wide (Southern Arizona; México: Sonora, Sinaloa, Chihuahua)

8. N. schottii (Torr.) A. Gray

Calyx 4-5 mm. long, the tube about 3 mm. long, 3-4 mm. in diameter, the teeth 1-2 mm. long; flowers 11-13 mm. long; inflorescences fasciculate or racemose, 1-18-flowered, the pedicels 6-13 mm. long; leaflets elliptic to suborbicular, 1-5 cm. long, 0.6-3.5 cm. wide (México: Guerrero, Puebla)

9. N. montana Rose

Pedicels, calyx, leaflets, and rachis of leaf pubescent; leaflets mostly thickened, often pubescent, especially along the margins and veins (México: Chihuahua, Coahuila, Zacatecas, Jalisco, Querétaro, Morelos, Guerrero) 10. N. pringlei Rose

Calyx with tube 1-2 mm. long, 1.5 mm. in diameter and teeth 0.5-1.5 (-2) mm. long.

Flowers 7-10 mm. long; calyx 3.5-5 mm. long, glabrous or nearly so, the tube 2 mm. long, the teeth 1-1.5 mm. long; fruit essentially glabrous; leaflets glabrous to subglabrous (México: Guerrero) 11. N. leiogyne Sandw.

Flowers 4-7.5 mm. long; calyx 2-2.5 mm. long, the tube 1.5 mm. long, the teeth 0.5-1.5 mm. long; leaflets, calyx, and fruit pubescent to subglabrous (México: Sonora and Chihuahua south to Oaxaca) 12. N. microptera Poir.

Stipe of fruit longer than the calyx, about 3-6 mm. long; flowers 5-10 mm. long.

Flowers 5-8 mm. long; calyx teeth about 0.5 mm. long or less (México: Sinaloa, San Luis Potosí, Veracruz, south to Chiapas and Yucatán; Guatemala; El Salvador; Honduras; Costa Rica; Colombia; Venezuela) 13a. N. fruticosa Jacq. var. fruticosa

Flowers 8-10 mm. long; calyx teeth 0.5-1 mm. long (Guatemala; El Salvador; Ecuador; Peru; Bolivia; Paraguay; Argentina) 13b. N. fruticosa var. guatemalensis (Rose) Rudd